ABSTRACT

A new system and method is described, utilizing a scheduler based on a transmission power consumption calculation and prioritizing algorithm. The system utilizes the (APSD) protocol specified in the 802.11e draft for saving power in wireless local area networks. The system comprises an access point having a priority queue, one or more stations, an APSD frame comprising an association ID for identifying one of the stations and a scheduled wake-up time for the identified station. An algorithm is employed for calculating the total transmission power consumption of downlink data for the stations. The AP originates and transmits to the one or more stations the APSD frame of the scheduled activation delay time. The current data to be transmitted to each station is accessed by the algorithm to determine the total transmission power consumption to each station. A priority queue in the AP is ordered from the lowest to the highest receiving power consumption, assigning the highest priority to the lowest power consumption transmission to minimize total power consumption to the PS stations in the AP queue.

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